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**Subject:** More supporting documents to add Firefighters to the National PFAS Registry  
**Attachments:** Firefighters-PFAS (10).pdf; burlington presentations for web rev1 (1).pdf

Hi Peter.,

Thank you for reviewing the documents I sent on Friday. I wanted to add that the Professional Fire Fighters of Massachusetts have just voted to make PFAS legislation a priority for their body. They would not take on such a monumental time consuming effort if they were not concerned this is an occupational exposure.

The supporting documents today are written for the fire-service, re occupational exposure to PFAS.

Again, we respectfully ask Senator Shaheen, and Senator Warren to add the fire service to the PFAS Registry.

The PDF titled **Firefighters-PFAS (attached) by Leslie Cadet**, Harvard TH Chan School of Public Health, It is designed specifically for the military fire service, However, it is no different from a career firefighter who works in a station in a city, or puts out wild-land fires, or is a volunteer. They all train with AFFF. They absolutely all wear PPE.

Also **Dr Roger Klein's** 43 page Power Point demonstration on Firefighter PPE and PFAS. It begins on page 43, **Burlington Presentation (attached)**:

This **2006 article from Hemmingfire in Europe** shows the notification of the fire service that manufacturers are being told PFAS chemicals used in the making and coatings of PPE will be restricted. It includes statements by manufactures on how they are re-working their chemistry. Those same manufacturers stated in the USA they never used PFOA. That was a very deceptive statement. It well known in the industry that the chemicals used in the manufacturing process will degrade to form PFOA. So they stretched that quite a bit at our expense.

[http://www.hemmingfire.com/news/fullstory.php/aid/2660/PPE\\_\\_\\_Duty\\_of\\_Care\\_Forum\\_-\\_condensed.html](http://www.hemmingfire.com/news/fullstory.php/aid/2660/PPE___Duty_of_Care_Forum_-_condensed.html)

*In its draft opinion SEAC agrees with the principle of restricting PFOA, but has set the restriction thresholds for products containing PFOA and PFOA-related substances at a more realistic level, namely 25ppb and 1,000ppb respectively. This, says SEAC, will create 'the most appropriate EU-wide measure to address the identified risks in terms of the proportionality of its socio-economic benefits to its socio-economic costs'.*

*However, SEAC is also proposing a six-year derogation for professional textiles used in PPE worn by firefighters, the military, policemen, medical responders and workers exposed to risks from oil and chemicals.*

*These textiles use C8-related chemicals (capable of producing PFOA in degradation) to provide water and oil repellency and resistance to penetration by harmful chemicals such as o-xylene, sulphuric acid, sodium hydroxide and hydrochloric acid.*

*During the consultation period for the proposed restrictions, some stakeholders stated that some specifications requiring very high water, oil or chemical repellency, alternatives to C8 compounds were not technically feasible. The main issue claimed was that coatings using PFOA-free C6 technology did not resist multiple high temperature washing, leading to a need*

*for reapplication of protective coatings after each washing. This would entail less effectiveness and possibly a 10-fold higher emission of C6 chemicals compared to C8, resulting in substantial additional costs and an impact on the environment.*

**In Australia, the union is calling on blood testing for ALL firefighters for PFAS exposure. As well as the remediation of fire stations that are contaminated:**

<https://www.perthnow.com.au/news/health/toxins-testing-to-start-for-wa-firefighters-who-came-into-contact-with-foams-ng-b88888933z>

**Here in the USA....**

**Page 536 of the newly released PFAS report:**

<https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>

**"Individuals who perform jobs that require frequent contact with perfluoroalkyl-containing products, such as individuals who install and treat carpets or firefighters, are expected to have occupational exposure to these substances."**

**Peter, the fire service is on the front line of direct exposure daily. The IAFF sates the PFC toxic exposure here:**

[http://www.iaff.org/HS/SubstanceExposures/PDF/PFCs\\_FactSheet.pdf](http://www.iaff.org/HS/SubstanceExposures/PDF/PFCs_FactSheet.pdf)

**This article by Mindi Messmer demonstrates the unknown for the fire service. She is referring to the turnout gear we tested privately by Professor of Physics, Graham Peaslee extracted only fraction of the potential chemical that was in the new/never-worn PPE. Since this article appeared we now know that just that fraction is already 14,000 times the new Maximum Recommended Limit.**

<https://www.firefighternation.com/articles/2018/06/firefighter-cancer-quadfecta.html>

**Our gear is degrading in our fire stations for decades. It degrades in uv lighting.**

**In this portion of a comment I wrote to NFPA last year I was discussing the weathering of the fabric and the reports that substantiated same. The NKB AND KPB fabrics are the 'outer shells' of turnout gear.**

Additionally, weathering of your gear in UV lights (your stations/bays) is also a factor and may contribute to PFC dust in your stations. Because there have been no PFC dust studies of your stations, this is more 'unknown' area.

<https://www.nvfc.org/wp-content/uploads/2016/08/NIST-Report-on-Accelerated-Weathering-of-PPE.pdf>

PAGE 29: 4. Summary and Conclusions: However, exposure of NKB and KPB fabrics to simulated UV light caused rapid and extremely large loss in tear and tensile strength. The aging performance profiles (APP) of both the fabrics were similar in that significant deterioration occurred due to 13 d exposure to UV irradiation. (note: 13d exposure to UV irradiation in this study = 6.6 years of normal use, so don't think the deterioration occurs in 13 days please.)

This study indicates that the deterioration in the physical properties of polyaramids and polybenzimidazole are mainly due to photooxidative reactions, which change the chemical composition of the polymeric system

The photochemical reactions are associated with build-up of oxidation reaction products and new polymer end groups. These changes are known to be responsible for the loss in tensile strength as well as the color change.

**Lastly, here, in Environmental Attorney Robert Bilott's September 2017, 195-page plea to the CDC/ATSDR, EPA, and Jeff Sessions for immediate PFAS testing and studies for the fire service.**

<https://www.documentcloud.org/documents/3988104-Firefighter-Letter.html>

**The fire service must be added to the registry for the purpose of tracking the disposal of out-of-service turnout gear as is being done in Europe. We know the amounts of PFCs used in PPE are staggering.**

**I'm willing to bet Alex Dunn of EPA as well as Dr Peter Grevatt of EPA Water would support that.**

<https://www.firerescueforum.com/content>

## **What will it cover?**

- \* Disposal of firefighting clothing that contains restricted chemicals
- \* Maintenance of clothing containing restricted chemicals
- \* Legal and financial obligations regarding current contracts
- \* Legal and financial obligations of service contracts
- \* Managing a potential transition to non-PFOA PPE

**Peter, we anxiously await the Senators statement to add the fire service to the PFAS registry.**

**Thank you again so very much for your time and attention to this very serious matter.**

**Sincerely,**

**Diane Cotter**

**Rindge, NH**